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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/623,160	07/21/2003	Atsushi Takai	500.30802CC4	2704
20457	7590	11/04/2004	EXAMINER	
ANTONELLI, TERRY, STOUT & KRAUS, LLP 1300 NORTH SEVENTEENTH STREET SUITE 1800 ARLINGTON, VA 22209-9889				SINGH, DALZID E
ART UNIT		PAPER NUMBER		
				2633

DATE MAILED: 11/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/623,160	TAKAI ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Dalzid Singh	2633	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 21 July 2003.  
 2a) This action is **FINAL**.                            2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 35-45 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 35-45 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 21 July 2003 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. 09/121,591.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date 21 October 2003.

4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_.  
 5) Notice of Informal Patent Application (PTO-152)  
 6) Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 35-41 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 35, in lines 4-6, recites, "...for receiving said plurality of optical signals from said first apparatus and converting an optical frequency of at least one of said plurality of optical signals and transmitting..." It is not clear if there is another apparatus other than the plurality of apparatuses for receiving the optical signals from the first apparatuses. Based on this, claim 35 is indefinite for failing to particularly point out and distinctly claim the subject matter.

### ***Double Patenting***

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA

1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 35-45 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 2 and 6 of U.S. Patent No. 5,321,540. Although the conflicting claims are not identical, they are not patentably distinct from each other because the current application and the patent claim similar subject matter.

Regarding claim 35 (as far as understood), both the current application and the patent disclose a transmission apparatus comprising:

- an optical frequency selection unit (means for selecting); and
- an optical frequency conversion unit (means for converting; see claim 1).

The patent differs from the claimed invention in that the patent does not specifically disclose conversion of the optical frequency to a specific optical frequency corresponding to a specific apparatus. However, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to convert the

optical signal to a specific optical frequency and transmit that signal to a specific apparatus. One of ordinary skill in the art would have been motivated to do such in order to provide assignment of specific optical frequency to a particular apparatus.

Regarding claims 36 and 43, both the current application and the patent disclose a transmission apparatus comprising optical frequency selection unit for selecting an optical frequency signal. The patent differs from the claimed invention in that the patent does not specifically disclose conversion of the optical frequency to a specific optical frequency corresponding to a specific apparatus. However, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to convert the optical signal to a specific optical frequency and transmit that signal to a specific apparatus. One of ordinary skill in the art would have been motivated to do such in order to provide assignment of specific optical frequency to a particular apparatus.

Regarding claims 39-41 and 45, as discussed above, the patent discloses conversion unit for converting the optical frequency and selecting unit for selecting the optical frequency and differs from the claimed invention in that the patent does not disclose a control unit. However, it would have been obvious there exist a control unit to perform the conversion and selection of the optical frequency. Furthermore, it would have been obvious to provide notification that a particular frequency is selected in order to avoid selecting the already used optical frequency.

Regarding claim 42, both the current application and the patent disclose a transmission apparatus comprising:

an optical frequency conversion unit (means for converting; see claim 1).

The patent differs from the claimed invention in that the patent does not specifically disclose conversion of the optical frequency to a specific optical frequency corresponding to a specific apparatus. However, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to convert the optical signal to a specific optical frequency and transmit that signal to a specific apparatus. One of ordinary skill in the art would have been motivated to do such in order to provide assignment of specific optical frequency to a particular apparatus.

Furthermore, as discussed above, the patent discloses conversion unit for converting the optical frequency and selecting unit for selecting the optical frequency and differs from the claimed invention in that the patent does not disclose a control unit for allotting optical frequency signal to be transmitted to apparatuses. However, it would have been obvious there exist a control unit to allotting of the optical frequency to a particular apparatus.

Regarding claims 37, 38 and 44, in view of the rejection above, the patent discloses optical frequency division multiplexing network comprising plurality of nodes providing signal in optical frequency division multiplexing fashion (see claim1) and differ from the claimed invention in that the patent does not specifically disclose wavelength multiplexer and wavelength division demultiplexer. However, it would have been obvious that there exist a wavelength multiplexer and wavelength demultiplexer in order to form a multiplex optical signal and split the multiplexed optical signal into its separate wavelength, respectively.

5. Claims 35-45 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 2, 5 and 6 of U.S. Patent No. 5,510,921. Although the conflicting claims are not identical, they are not patentably distinct from each other because the current application and the patent claim similar subject matter.

Regarding claim 35 (as far as understood), both the current application and the patent disclose a transmission apparatus comprising:

- an optical frequency selection unit (means for selecting); and
- an optical frequency conversion unit (means for converting; see claim 2).

The patent differs from the claimed invention in that the patent does not specifically disclose conversion of the optical frequency to a specific optical frequency corresponding to a specific apparatus. However, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to convert the optical signal to a specific optical frequency and transmit that signal to a specific apparatus. One of ordinary skill in the art would have been motivated to do such in order to provide assignment of specific optical frequency to a particular apparatus.

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Regarding claim 42, both the current application and the patent disclose a transmission apparatus comprising:

an optical frequency conversion unit (means for converting; see claim 2).

The patent differs from the claimed invention in that the patent does not specifically disclose conversion of the optical frequency to a specific optical frequency corresponding to a specific apparatus. However, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to convert the optical signal to a specific optical frequency and transmit that signal to a specific apparatus. One of ordinary skill in the art would have been motivated to do such in order to provide assignment of specific optical frequency to a particular apparatus.

Furthermore, as discussed above, the patent discloses conversion unit for converting the optical frequency and selecting unit for selecting the optical frequency

and differs from the claimed invention in that the patent does not disclose a control unit for allotting optical frequency signal to be transmitted to apparatuses. However, it would have been obvious there exist a control unit to allotting of the optical frequency to a particular apparatus.

Regarding claim 37, in view of the above rejection, the patent discloses demultiplexing the optical signal, therefore there must be a demultiplexer to demultiplex the optical signal (see claim 1)

Regarding claims 38 and 44, in view of the above rejection, the patent discloses multiplexing the optical signal, therefore there must be a multiplexer to multiplex the optical signal (see claim 5).

6. Claims 35-45 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-3, 5-8, 13, 17-21 of U.S. Patent No. 5,801,864. Although the conflicting claims are not identical, they are not patentably distinct from each other because the current application and the patent claim similar subject matter.

Regarding claim 35 (as far as understood), both the current application and the patent disclose a transmission apparatus comprising:

- an optical frequency selection unit (means for selecting); and
- an optical frequency conversion unit (means for converting; see claims 2, 6, 7, 17 and 18).

The patent differs from the claimed invention in that the patent does not specifically disclose conversion of the optical frequency to a specific optical frequency corresponding to a specific apparatus. However, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to convert the optical signal to a specific optical frequency and transmit that signal to a specific apparatus. One of ordinary skill in the art would have been motivated to do such in order to provide assignment of specific optical frequency to a particular apparatus.

Regarding claims 36 and 43, both the current application and the patent disclose a transmission apparatus comprising optical frequency selection unit for selecting an optical frequency signal. The patent differs from the claimed invention in that the patent does not specifically disclose conversion of the optical frequency to a specific optical frequency corresponding to a specific apparatus. However, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to convert the optical signal to a specific optical frequency and transmit that signal to a specific apparatus. One of ordinary skill in the art would have been motivated to do such in order to provide assignment of specific optical frequency to a particular apparatus.

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have been obvious to provide notification that a particular frequency is selected in order to avoid selecting the already used optical frequency.

Regarding claim 42, both the current application and the patent disclose a transmission apparatus comprising:

an optical frequency conversion unit (means for converting; see claims 2, 6, 7, 17 and 18).

The patent differs from the claimed invention in that the patent does not specifically disclose conversion of the optical frequency to a specific optical frequency corresponding to a specific apparatus. However, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to convert the optical signal to a specific optical frequency and transmit that signal to a specific apparatus. One of ordinary skill in the art would have been motivated to do such in order to provide assignment of specific optical frequency to a particular apparatus.

Furthermore, as discussed above, the patent discloses conversion unit for converting the optical frequency and selecting unit for selecting the optical frequency and differs from the claimed invention in that the patent does not disclose a control unit for allotting optical frequency signal to be transmitted to apparatuses. However, it would have been obvious there exist a control unit to allotting of the optical frequency to a particular apparatus.

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7. Claims 35-45 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 4-6 of U.S. Patent No. 6,619,865. Although the conflicting claims are not identical, they are not patentably distinct from each other because the current application and the patent claim similar subject matter.

Regarding claim 35 (as far as understood), both the current application and the patent disclose a transmission apparatus comprising:

an optical frequency selection unit (means for selecting); and  
an optical frequency conversion unit (means for converting; see claims 4-6).

The patent differs from the claimed invention in that the patent does not specifically disclose conversion of the optical frequency to a specific optical frequency corresponding to a specific apparatus. However, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to convert the optical signal to a specific optical frequency and transmit that signal to a specific apparatus. One of ordinary skill in the art would have been motivated to do such in order to provide assignment of specific optical frequency to a particular apparatus.

Regarding claims 36 and 43, both the current application and the patent disclose a transmission apparatus comprising optical frequency selection unit for selecting an

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Furthermore, as discussed above, the patent discloses conversion unit for converting the optical frequency and selecting unit for selecting the optical frequency and differs from the claimed invention in that the patent does not disclose a control unit for allotting optical frequency signal to be transmitted to apparatuses. However, it would have been obvious there exist a control unit to allotting of the optical frequency to a particular apparatus.

Regarding claims 37, 38 and 44, in view of the rejection above, the patent discloses wavelength division multiplexed signal (see claims 4-6) and differ from the claimed invention in that the patent does not specifically disclose wavelength multiplexer and wavelength division demultiplexer. However, it would have been obvious that there exist a wavelength multiplexer and wavelength demultiplexer in order to form a multiplex optical signal and split the multiplexed optical signal into its separate wavelength, respectively.

### ***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dalzid Singh whose telephone number is (571) 272-3029. The examiner can normally be reached on Mon-Fri 9am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

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DS  
October 27, 2004

*Dabid Singh*